

Eurasian
Research Bulletin

Development Of Metrology And The Role And Importance Of Metrological Supply In Enterprises

Badalov Nomoz Juraboyevich

Jizzakh Polytechnic Institute, senior teacher,
Phone Number: +998903110662
nomozbadalov@gmail.com

**Shokirov Muxammad
Abduraxmonovich**

National Institute of Metrology of Uzbekistan, State Organization
Head of the Jizzakh branch тел: +998902291442
muxammadinyo@mail.ru

**Badalov O'tkirbek Nomoz
O'g'li**

Jizzakh Polytechnic Institute, Master's Degree,
Phone Number: +998915907097
badalovotkirbek@gmail.com

ABSTRACT

The main purpose of metrological support in production is to increase the quality of the product at all stages of its creation and use and its competitiveness in the conditions of market relations. The level of metrological supply in production has a direct impact on product quality indicators, with a special focus on metrological supply issues in order to increase the effectiveness of this impact.

Keywords:

Metrology, standard, product, aggregate, detail, interchangeability, quality, objective, normative document, certificate, market, technical technology, measurement, test tool, measuring instrument.

The development of metrology The history of the science of these measurements is thousands of years. Based on its content and essence, the period of development can be divided into the following stages: the period of ancient development, the period of spontaneous development, the introduction of the metric system, the period of integration of metrological services, the period of development of Uzbekistan.

The period of ancient development. The need for measurements dates back to ancient times. If we analyze the literal meaning of the term "measurement", in ancient times, humanity received mainly "organoleptic measurements" - that is, approximate information on this or that physical property

through its sensory organs. In this case, these sensory organs acted as a means of measurement. Although no exact value was obtained in such measurements, a comparison was made in each measurement, more precisely in the evaluation, against a particular measurement. Initially, the measure of comparison was not intangible, but was determined individually based on a person's level of experience, intelligence, and knowledge of the environment. Later, as work and feed tools became more practical, comparative measurements became more material. In everyday life, man began to measure different sizes, distances, surface areas, sizes and masses of objects, time, etc., based on his own intuition

and experience, without knowing the causes and sources of these processes [1].

As humanity progressed, it continued to improve its tools of work and its way of life. He was in the process of further improving living and working conditions. Because of the inconvenience of working with intangible dimensions, and individuality, he sought ways to materialize it. At the same time, different units of measurement emerged.

The oldest unit of measurement is the anthropometric, which is based on conformity or inclination to certain organs of man. For example: elbow - the distance between the thumb and forefinger while spreading the palm, ear - the distance between the hands spread out in two directions, step - the unit of walking in a quiet step of an adult, elbow - the distance between the palm and elbow, mile - the sound of one in the open field the distance that can be heard, ladon - the width of the remaining four, excluding the big toe, feet - the length of the sole of the foot; pyad is the distance between the recorded head and index fingers, etc. [2].

The main purpose of metrological support in production is to increase the quality and competitiveness of the product at all stages of creation and use in market conditions, to ensure the interchangeability of units, parts, details, to provide the necessary accuracy, objectivity and reliability of measurement results. to increase the efficiency of testing, to carry out measurement work related to trade and consumer services, to address issues of health, labor and environmental protection [3].

The level of metrological supply in production has a direct impact on product quality indicators, in order to increase the effectiveness of this impact, special attention is paid to metrological supply. Legal order established in metrology, protection of rights and interests of legal entities and individuals from negative consequences due to unreliability of measurement results, establishment of relations between government agencies and business entities on production, repair, sale and lease of measuring instruments, national economy of the Republic of Uzbekistan to create the basis and conditions to achieve uniformity and required accuracy in all areas of the

complex, to harmonize the rules and measures of the national system of ensuring the unity of measurements with the recommendations of similar organizations of international organizations and other countries to eliminate technical barriers to international cooperation; on mutual recognition of the results of measurement, comparison, calibration, testing, certification and accreditation of metrological agencies and services It is important to create conditions for the implementation of international agreements, to harmonize the requirements of the agency at the level of business entities with the requirements and rules of quality systems, as well as other systems operating in enterprises and organizations [4].

The main tasks of metrological service in production, ie on the basis of introduction and observance of the system of international units and harmonization of metrological norms, rules and measures of the agency with recommendations of the international organizations and national systems on maintenance, standardization, certification and accreditation Participate in the development of scientific and technical potential, the national economy on the basis of improving the unity of measurement, required accuracy, reliability, as well as improving the methods of measurement, measuring instruments, productivity and reliability, predicting the development of the Agency as an integral part of the national economy , the product on the basis of metrological support at all stages of product creation and the organization of measurements in a satisfactory manner in the conditions of market relations ensure quality and competitiveness, create a legal basis for the installation and provision of measurement results with the necessary reliability in all areas of public interest, including trade, health, occupational safety, products and technologies, environmental protection [5].

Implementation of the goals and objectives of metrological support at industrial enterprises is carried out by metrological support of the national economy of the country, taking into account economic entities of all levels of different specialties and forms of

ownership. The creation and improvement of state standards and high-precision measuring instruments of units of measurement, the organization and conduct of scientific research in order to establish norms and rules for the transfer of dimensions of units of measurement from standards to all measuring instruments play an important role in product development.

Standardization of basic regulations, rules, requirements and norms of ensuring the unity of measurements in metrological supply at production enterprises, creation and maintenance of legal, normative and methodological basis, development and approval of metrological norms and rules to ensure protection of the enterprise from negative consequences of unreliable measurements, science, information and the creation and management of a metrological infrastructure structure consisting of information and metrological offices, technical, labor and logistical resources [6].

It is necessary to determine the activities of regional and intersectoral coordination in metrology at industrial enterprises, the establishment, approval, storage and application of standards of units of measurement of metrological regulations, measuring instruments, methods and general metrological conditions for measurement results.

It is necessary to carry out metrological control in production, to establish normative acts on metrological issues together with service agencies. It is important to improve the skills of scientific and engineering personnel in metrology, to coordinate work to ensure the unity of measurement, to carry out metrological inspection and control at the enterprise in accordance with the state metrological inspection and control of the State Standard of the Republic of Uzbekistan UzDst 8.002.

Measurement information is subject not only to quantitative requirements, but also to qualitative ones. It consists of characteristics such as measurement accuracy, reliability, body cost, and efficiency. At the heart of all these quality descriptions lies the metrological supply. Metrological supply can be defined by the definition and application of technical

means, procedures and rules, norms, scientific and organizational bases necessary to ensure the uniformity of measurements and achieve the required accuracy. Based on the description, it is possible to say that the organization, maintenance and implementation of measuring instruments, development and implementation of normative documents on measurements, processing and recommendation of their results, examination of documents, state testing of measuring instruments, and metrological certification of methods can serve as an example of the function of metrological support.

There are four components of metrological supply. The first "scientific basis" is the science of metrological measurements. The second "technical basis" is the state standards of the unit of quantities, the transfer of the unit of catalysts from the standards to the working means, the creation and development of measuring instruments, mandatory state testing of measuring instruments and metrological certification of their methods, mandatory state verification of measuring instruments, creation of standard samples on the composition and properties of substances and materials, standard references, mandatory state tests of the product. The third "organizational basis" is the metrological service of the Republic of Uzbekistan, consisting of metrological services in the state and courts. The fourth "regulatory framework" consists of the relevant laws of the Republic, state standards, regulations of the state and industry.

Metrological support consists of improving the quality of this product, the efficiency of production and automation, ensuring the interchangeability of parts and aggregates, ensuring the reliability of accounting for material resources and energy resources, protecting the environment, maintaining health. The level of metrological supply has a direct impact on product quality. In order to further increase the effectiveness of this impact, special attention will be paid to metrological maintenance and metrological support in the preparation of production. This will create a worthy basis for the further deepening of

market relations in the Republic and increase the export potential of manufactured products.

References:

1. Juraboevich B. N. Products in Manufacturing Enterprises the Essence of Quality Management //International Journal of Development and Public Policy. – 2021. – Т. 1. – №. 5. – С. 117-118.
2. O'g B. O. N. et al. THE ROLE OF QUALITY MANAGEMENT SYSTEM IN INCREASING PRODUCT QUALITY IN ENTERPRISES //Web of Scientist: International Scientific Research Journal. – 2021. – Т. 2. – №. 12. – С. 228-233.
3. Крылова А.Н. Основы метрологии, стандартизации и сертификации. М.:Аудит, 1998, ЮНИТИ.
4. Бадалов Н. Ж., Бердимуродов Г. Т., Бадалов У. Н. СИФАТЛИ МАХСУЛОТ ИШЛАБ ЧИҚАРИЛИШИДА СИНОВ ВА ЎЛЧОВЛАРНИНГ АХАМИЯТИ //Ижтимоий Фанларда Инновация онлайн илмий журналы. – 2022. – Т. 2. – №. 1. – С. 101-106.
5. Бадалов Н. Ж., Бадалов У. Н. КОРХОНАЛАРДА МАҲСУЛОТЛАР СИФАТИНИ БОШҚАРИШНИНГ АСОСИЙ ФУНКЦИЯЛАРИ //Academic research in modern science. – 2022. – Т. 1. – №. 1. – С. 38-45.
6. <https://internationaljournals.co.in/index.php/giirj/article/view/413>.